



PATENT
Attorney Docket No. VACCINE-07971

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: David R. Milich *et al.*

Serial No.: 10/630,074

Group No.:

Filed: 07/30/2003

Examiner:

Entitled: **Human Hepatitis B Virus Core Proteins As Vaccine Platforms And Methods Of Use Thereof**

**INFORMATION DISCLOSURE
STATEMENT TRANSMITTAL**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)

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Dated: October 29, 2003

By: Cliff Cannon-Cin

Cliff Cannon-Cin

Sir or Madam:

Enclosed please find an Information Disclosure Statement and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. **08-1290**. An originally executed duplicate of this transmittal is enclosed for this purpose.

Dated: 10 - 29 - 2003

Maha Hamdan

Maha A. Hamdan

Registration No. 43,655

The PTO did not receive the following listed Items(s) for OI 10/630,074

MEDLEN & CARROLL, LLP
101 Howard Street, Suite 350
San Francisco, California 94105
415/904-6500



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By: 
Cliff Cannon-Cin

Sir or Madam:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

The following patents are referred to in the body of the specification:

- WO 02/13765 published 12/21/02;
- U.S. Patent No. 4,683,195 issued 7/28/87 to Mullis *et al.*
- U.S. Patent No. 4,683,202 issued 7/28/87 to Mullis; and
- U.S. Patent No. 4,965,188 issued 10/23/90 to Mullis *et al.*

The following printed publications are referred to in the body of the specification:

- Pumpens and Grens (2001) "HBV Core Particles as a Carrier for B Cell/T Cell Epitopes," *Intervirology* 44:98-114;

- Jegerlehner *et al.* "A molecular assembly system that renders antigens of choice highly repetitive for induction of protective B cell responses," (2002) Vaccine 20:3104;
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Applicants have become aware of the following printed publications which may be material to the examination of this application:

- U.S. Patent No. 6,602,705 issued 8/5/03 to Barnett *et al.*;
- U.S. Patent No. 6,406,705 issued 6/18/02 to Davis *et al.*;
- U.S. Patent No. 6,231,864 issued May 15, 2001 to Birkett;
- U.S. Patent No. 4,599,230 issued July 8, 1986 to Milich *et al.*;
- U.S. Patent No. 4,599,231 issued July 8, 1986 to Milich *et al.*;
- U.S. Patent No. 4,683,136 issued July 8, 1987 to Milich *et al.*;
- U.S. Patent No. 5,726,011 issued March 10, 1998 to Milich *et al.*;
- U.S. Patent No. 4,818,527 issued April 4, 1989 to Thornton *et al.*;
- U.S. Patent No. 4,882,145 issued November 21, 1989 to Thornton *et al.*;
- U.S. Patent No. 5,143,726 issued September 1, 1992 to Thornton *et al.*;
- WO 01/98333 A2 published 12/27/01;

- Genbank Accession No. NP_671816 printed 8/3/93;
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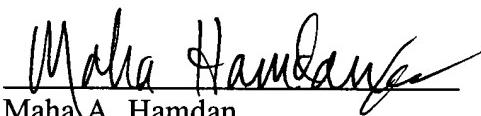
PATENT
Attorney Docket No. VACCINE-07971

- Brown *et al.*, U.S. patent publication No. US 20030175296 published Sept. 18, 2003, and entitled "Chimaeric hepadnavirus core antigen proteins."

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

Signed on behalf of:

Dated: 10 -29 - 2003



Maha A. Hamdan
Registration No. 43,655

MEDLEN & CARROLL, LLP
101 Howard Street, Suite 305
San Francisco, California 94105
415/904-6500

FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: VACCINE-07971		Serial No.: 10/630,074	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (See General Sheets If Necessary)				Applicant: David R. Milich <i>et al.</i>			
				Filing Date: 07/30/2003		Group Art Unit:	
U.S. PATENT DOCUMENTS							
Examiner Initials	Cite No.	Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	1	4,683,195	7/28/87	Mullis <i>et al.</i>			
	2	4,683,202	7/28/87	Mullis			
	3	4,965,188	10/23/90	Mullis <i>et al.</i>			
	4	6,602,705	8/5/03	Barnett <i>et al.</i>			
	5	6,406,705	6/18/02	Davis <i>et al.</i>			
	6	6,231,864	5/15/01	Birkett			
	7	4,599,230	7/8/86	Milich <i>et al.</i>			
	8	4,599,231	7/8/86	Milich <i>et al.</i>			
	9	4,683,136	7/8/87	Milich <i>et al.</i>			
	10	5,726,011	3/10/98	Milich <i>et al.</i>			
	11	4,818,527	4/4/89	Thornton <i>et al.</i>			
	12	4,882,145	11/21/89	Thornton <i>et al.</i>			
	13	5,143,726	9/1/92	Thornton <i>et al.</i>			
FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS							
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation
							Yes
	14	WO 02/13765	12/21/02 ✓	PCT			
	15	WO 01/98333 A2	12/27/01 ✓	PCT			
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)							
16 ✓	Pumpens and Grens (2001) "HBV Core Particles as a Carrier for B Cell/T Cell Epitopes," <i>Intervirology</i> 44:98-114						
17 ✓	Jegerlehner <i>et al.</i> "A molecular assembly system that renders antigens of choice highly repetitive for induction of protective B cell responses," (2002) <i>Vaccine</i> 20:3104						
18 ✓	Anderson and Young, Quantitative Filter Hybridization, <i>in Nucleic Acid Hybridization</i> [1985]						
19 ✓	Smith and Waterman (1981) "Comparison of Biosequences," <i>Adv. Appl. Math.</i> 2: 482-489						
20 ✓	Needleman and Wunsch (1970) "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins," <i>J. Mol. Biol.</i> 48: 443-453						
21 ✓	Pearson and Lipman (1988) "Improved tools for biological sequence comparison," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 85:2444						
22 ✓	Sambrook <i>et al.</i> , <i>Molecular Cloning: A Laboratory Manual</i> , Cold Spring Harbor Press, NY, pp 9.31-9.58, 1989						
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24 ✓	GenBank Accession No. NKVLC2 printed 7/16/99						
25 ✓	GenBank Accession No. NP_040993 printed 12/8/02						
Examiner:				Date Considered:			
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FORM PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.: VACCINE-07971	Serial No.: 10/630,074
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <small>TRADE SECRETS & TRADE NAMES (If Necessary) Several Sheets If Necessary)</small>		Applicant: David R. Milich <i>et al.</i>	
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		Applicant: David R. Milich <i>et al.</i>	
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Attorney Docket No.: VACCINE-07971

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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(37 CFR § 1.98(b))

Applicant: David R. Milich *et al.*

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <small>(See General Sheets If Necessary)</small>		Applicant: David R. Milich <i>et al.</i>		
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